

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM00000X8

This is to certify:

That the Diesel Engine

with type designation(s)
6/8DE(M)-28(F)(L)

Issued to

Daihatsu Diesel Mfg. Co. Ltd Moriyama Division
Shiga Pref. Moriyama, Japan

is found to comply with

DNV GL Rules for classification, Ships - DNVGL-RU-SHIP-Pt4 Ch3 Sec1,
Reciprocating Internal Combustion Engines

Application :

Mechanical propulsion, multi engine plant / auxiliary

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **30th June, 2019**.

Issued at **Høvik** on **8th June, 2018**

DNV GL local station: **Kobe**

for **DNV GL**

Approval Engineer: **Tage Olav Alexander Strøm**

.....
Oddvar Deinboll
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, pulsating pressure charging system, direct injection, injection operation by cams, valve operation by cams, liquid fuel

Cylinder bore [mm] 285
Piston stroke [mm] 390
No. of cylinders 6,8

"6/8" : Number of cylinders
"DE" : Model Name
"28" : Cylinder bore size (cm)
"M" : Propulsion engine, e.g. 8DEM-28
"- " : Generator engine, e.g. 8DE-28
"F" : Front driving end for power-takeoff, e.g. 8DEM-28F
"L" : Anticlockwise rotation, seen from flywheel side, e.g. 8DEM-28L

Application/Limitation

Rated power [kW/cyl.]	378.3	378.75	378.75	378.3
Rated speed [rpm]	720	720	750	750
Mean effective pressure [bar]	25.3	25.4	24.4	24.3
Max. firing pressure [bar]	190	190	190	190

Type Approval documentation

Tests carried out

Documentation:

Test report title Test Records of the diesel engine at shop trial
Place of test Moriyama, Japan
Date of test 2015-05-18 until 2015-05-19

Test engine:

Model 8DE(M)-28
Serial no. DET828Z0001
No. of cylinders 8
Power [kW/cyl.] 3030
Speed [rpm] 720

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval certificate was issued.

In case where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Job Id: **262.1-018321-3**
Certificate No: **TAM00000X8**

Other Conditions

Flexible hoses to be Type Approved by DNV GL.

Engine safety, control and monitoring systems, including sensors and actuators are not covered by this type approval certificate. Documentation for engine safety, control including speed governing and monitoring systems shall be submitted for approval according to the Rules Pt.4 Ch.9 Sec.1 Table 5 and/or as listed in relevant type approval certificates.

Electric cables and installation of this is not covered by this approval and must be verified to comply with the requirement of the Rules Pt.4 Ch.8 - Electrical Installation.

END OF CERTIFICATE